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pages **Bois d'Arc Timber**

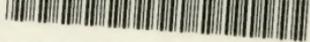
BY

REV. J. M. COCHRAN.

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## Preface.

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Wherever Bois d' Arc timber will grow the following pages will show the possibility of settling the question of good public highways. Let every country where this valuable timber can be produced enter upon the work of growing it in place of inferior varieties, and a system of the finest public highways the world ever saw will be produced at the smallest possible cost, and a large number of other important results will be accomplished. In this timber the people of North Texas have had a treasure whose real value is a hundred, or a thousand fold greater than they have estimated, and the design of the following pages is to call attention to this neglected native product. For a number of years past the subject of public highways has attracted much attention, and a vast amount of literature has been published, societies have been organized, and official bodies have employed their utmost energies, and the outcome of it all has been very little, and very indefinite. Let them take up the following facts about, probably, the most valuable timber on earth, act upon them, and their object of securing good public highways will be accomplished beyond their fondest dream.

AUTHOR.

## BODOCK.

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Bois d' Arc, Osage Orange. These are the two names public print gives to what I regard as the most valuable timber on the face of the earth. The Red River valley of North Texas is its native home, and the people call it Bodock. Bois d' Arc is the name given to it by a foreign language, and public print is the only thing that perpetuates the foreign word. The people where the timber grows in all its spontaneous and native vigor have a right to name it, and no other people have a right to dictate to them any other name or pronunciation than what they have given it, which is Bodock. Osage Orange has no right to supplant the name Bodock, for it is used only in the old states, where they know almost nothing about it, while Bois d' Arc has no right to dictate the English phonetic spelling and pronunciation, which is Bodock. In this article I do not propose to comply with foreign customs, but to follow the order of right, and call the timber what it is called where it grows, and where no other name is known than Bodock, with its English phonetic pronunciation.

Few people appreciate the value of a durable timber. One that will last is what men want. Timber is used in all countries. It makes no difference how savage a tribe may be they use timber, and in civilized countries it is used for so many purposes that it is at once one of the leading necessities of the human race.

This country is rapidly settling, and our timber forests are melting away, almost like snow before a summer's sun. Timber of all kinds is now cheap, but the day is coming when it must advance, and it is probably in the near future. The time is coming when houses will not be built out of pine lumber, and it is also near when houses now made of pine lumber will be unfit for use, for such houses do not last long.

Where I have lived for sixteen years Bodock grows spontaneously all over the country, and I have been a close student of its habits, and of all the features that make up its general character. The result of all this observation and experience is that I am convinced that even the people where it grows do not appreciate one tenth part of its real, substantial value, and it has been fearfully wasted. I know one flour mill that has burnt it to a large extent for cord wood for perhaps twenty years, and I never passed the mill and saw it piled up for cord wood when I did not feel a sense of humiliation at seeing such a waste in a country where I lived. I have seen farmers cut it down and burn it just to get it out of the way. It is useless to belt large trees, and expect them to rot and fall like other timber, for they will not do it. The possibilities are that when a large dead Bodock is left in a field, at the end of a century the old giant would still be bidding defiance to the ravages of time, and to the inroads of water and decay. There is only a limited quantity of it in the country, and its merits are being more and more recognized every year. The use of it on railroads is rapidly increasing, and it is being cut and shipped out of the country for various purposes; so the North Texas supply, which is, as far as I know, the only supply in the world, will soon be exhausted. This being the case, the present article is for the purpose of calling public attention to its value, and to encourage the planting and cultivation of the Bodock wherever this pamphlet may go.

It is a southern growth, for it will not stand the heavy freezes of cold climates. The south may, therefore, be proud of her inheritance of probably the most valuable timber on the face of the earth. Let her only improve her inheritance and

privileges as it should be done, and it will be worth untold wealth to her; not only in its use, but in shipping it to cold countries. How far north it will grow I do not know. I once saw a hedge of it in the state of Delaware, twenty miles south of Philadelphia, but it appeared to have a feeble growth, and did not show the luxuriant vitality that it does in its native Texas soil and climate; however, its feeble growth might have been caused by close trimming which it does not often get in Texas hedges.

Cedar has been, in all ages, accepted as, probably, the most durable timber in existence, but there were large cedar trees growing on my father's farm in Alabama, and I am well acquainted with it. I was raised in a cedar country, and have lived sixteen years in a Bodock country, so I ought to be prepared to judge of the relative durability of each timber. My father generally made all his gate and bar posts out of cedar, and from seven to ten years was as long as they would last. They would rot off at the edge of the ground within that time. In 1868, or about that time, I saw a plank fence put up by Dr. L. D. Lusk, in the edge of Gunter'sville, Ala., the county seat of Marshall county. He bought cedar posts at 25c apiece, and put up a plank or board fence about a quarter of a mile long. at the end of about seven years the posts were rotting off, and the fence falling down. I was a personal witness of this fact, and give it from personal knowledge, so there is no chance for a mistake. From what I have learned I think that where it grows in a dry climate like Middle or Western Texas, it may be more durable, and last much longer than it does in Alabama, and the same may be true when it grows in cold climates, but it possesses only a small fraction of the ability to resist rot under ground that is shown by our noble Bodock.

"Twenty years longer than rock." That is the length of time that it is said Bodock will last. Five dollars for a rotten piece of Bodock. This has been offered by, probably, hundreds of men in North Texas, and I never knew one of them to pay it, for I never knew the rotten Bodock to be furnished. It is said that a few years ago a St. Louis agent came to Bonham

to investigate the rot resisting power of Bodock. A post that was known to have been set about fifty years ago was taken up and examined, and not a sign of rot did it show. I heard this report, but know nothing of its truthfulness. In 1889, the county court house was torn down, and a fine building was erected in its place. I was told that in excavating a foundation some Bodock was found that was put there when the old house was built, about fifty years ago, and that it showed no signs of decay.

In North Texas, there are many wire fences that were put up twenty years ago with Bodock posts, but the owners never think about examining to see how they are getting along. If a Bodock stake can be found it will always be driven to mark a land corner, and when it is put up no one thinks of such a thing as it rotting off. When the foundation of a wooden house is laid Bodock blocks are used, and where it grows, it would, probably, be difficult to find a house with any other than Bodock pillows.

These are the purposes for which it is used on farms, and it would be employed in many other ways if it were not for two or three defects. One is that it grows very crooked, and the other is that it is generally scrubby and knotty. Another objection is that it splits so easily that nails cannot be driven in it, and still another objection is that it is so hard that when it gets dry it is almost impossible for a nail to penetrate it. I think that the first two objections are caused from the biting and cropping of cattle. All kinds of stock eagerly relish the leaves and twigs, and their continual cropping of it while it is small causes it to grow knotty and crooked, for it should be remembered that this is a new country, and all the large Bodock it contains grew up before the land was fenced, and while cattle had free access to it. As to its hard, and splitting qualities they could be overcome to some extent by steaming before nails are driven. As to the crooked, knotty and scrubby growth, I am confident that these objections could be overcome entirely by thick planting, and keeping stock off until the limbs are out of their reach. But even then, in winter,

mules will bark every small tree they can find. I have seen many Bodocks growing among timber that stood thick, and it was as straight, and as free from knots as other timber.

When it is seasoned Bodock is the heaviest timber I ever saw, but, although it is so hard and heavy, still it chops easily. It is nearly as easy to chop when it is seasoned as it is green. I attribute this to the fact that when it splits so easily, when chopping the chips do not hang as in other timber. It is so hard that when an ax enters it there is danger of a broken tool in the near future. In chopping it, I have broken a number of valuable axes. However axes are generally broken by chopping in knotty places. Some men will not allow any one to use their axes in Bodock, and it is the same way with saws. It has a thin white sap, and a deep yellow heart. The sap is exceptionally thin.

There are many other puposes for which it would answer if it would grow straight and free from knots, and, as already stated, thick planting would probably effect this object. Pole or rail fences could be built out of it. Cribs, stables and barns could be built out of it that would last a life time, or longer, while log dwellings could also be built. If it would grow straight, and free from knots, it could be used for roofing material, and a roof of it would be as durable as slate.

Before barbed wire was invented Bodock hedges were extensively planted on the prairies, but now farmers do not like them. It grows too fast, and too large, and it is almost impossible to control it. These are qualities that do not suit a hedge plant; but I think, and always have thought that by puactual trimming in summer when the young shoots are tender, and doing it often, would control the vigorous growth.

There is a tree growing near Gobei, that I never saw anywhere else, that would make a finer hedge plant than Bodock. The people call it pepper wood, and I never saw it anywhere than on my farm, and close to it. It has short, sharp thorns, and is very bresh and easily broken. Hedges could be pruned with a stick by breaking off the limbs, but Bodock is so tough that it is difficult to trim even with a

sharp instrument. The pepper wood tree never grows large. One foot in diameter is about as large as I ever saw. The thorns are short, and thicker than they are on Bodock, and a tree as large as a peach tree will bear a profusion of small berries, which answer for seed. This is a digression from the Bodock subject, but I am convinced it would make one of the finest hedge plants ever introduced, and I wished to call attention to it in connection with Bodock hedges.

Before barbed wire fences were introduced into this country, a great many picket fences were made. They were made out of pickets just large enough to keep hogs from bending them, and out of Bodock timber. They were generally cut five and one half feet long and set in ditches sixteen inches deep, but they never have given satisfaction. Wherever there is a crooked one cattle or hogs can crowd through them. Pickets four and one half feet long with one barbed wire above is the best. The pickets are held together at the top by two small wires which are crossed between the pickets, back and forward.

Bodock could be used, also, in tile drainage, and by skillful preparation, Bodock lumber might possibly be used for city water pipes. If it could be made to grow tall and straight it could also be used for lumber.

These are about the sum of farm uses that it would answer, with the exception of food for silk worms. It is said that for this purpose it nearly equals the mulberry.

If it could be made to grow straight, it would surpass anything that railroads could get. They use a vast amount of timber, and for bridges, trestles and ties it would be nearly equal to iron. It splits so badly that railroads will not have it for ties, but surely some one could invent a method to overcome this difficulty. Iron cross ties are used, and if the rails can be fastened to them some one could certainly effect the same thing with Bodock ties.

I never saw anything used for telegraph poles but cedar, and I have often wondered where they got so much of it. Bodock would be equally as superior for this purpose as it

would be for fence posts, if it could be made to grow straight. I have little idea how long a large Bodoock telegraph pole would last, but I would not put it under two hundred years.

Bodoock has one characteristic that I never saw in any other timber. As far as it has been tested it has proved its ability to withstand rot and decay as well, or better, under ground than above ground. This is a quality that places it far in advance of any timber on earth, for I have never heard or read of any other wood on earth that possessed this quality. Chestnut is very durable above ground, but it rots quickly under ground, and it is the same way with many other timbers. Then wood lice will eat up chestnut, and other soft woods under ground, but Bodoock is so hard that they will not touch it. Here in Texas worms destroy timber soon after it is cut, at a fearful rate, and they will work under the bark of Bodoock and a little on the sap, but I never knew one to penetrate the yellow heart.

It is said that it makes the finest street pavement in the world, and some Texas cities are reaping the benefit of this quality. Last August I was in Paris, thirty-eight miles east of Bonham, and carefully examined the pavement. I saw no reason why its superior claim to this distinction should be disputed, for it showed qualities which stone does not possess. For paving it is sawed into blocks about six inches long, and these blocks are then set on end, and as close together as possible. All limbs and sticks two inches in diameter are used, and the large and small pieces are mixed indiscriminately together. I saw no large blocks, for I think that about eight or ten inches in diameter was the largest and about two inches the smallest. Round pieces are used, and no effort is made to square and fit them close together.

If it makes such fine pavement for city streets, why should not all public roads be also paved with it? I see no reason why it could not be done if the supply of timber was at hand. If it makes the finest pavement in the world, why should not all the public highways of the world be paved with it as soon as possible? Why should not every city corpora-

tion in the world plant a forest large enough to pave its streets? Why should not the legal authority in charge of every public road in the world plant enough of Bodock, close to its road, to pave it? The timber for these purposes could be grown within twenty or thirty years. If rock could be planted and made to grow where it is wanted, there would be millions of rock farms planted all over the world, in a short time, yet here is a timber said to be superior to rock for paving, and many other purposes, and a few hedge rows is all that has been planted.

Why does not private enterprise enter upon this work, and make the best investment that could probably be made? An acre well set in Bodock, when well matured, would be one of the most valuable pieces of property that could be found. Why not plant millions of acres close to the rivers where it could be transported cheaply to distant localities? Why not plant millions of acres near the sea coast where it could be shipped to our northern cities, and to all ports of the world, and supply those countries with it where it will not grow? Why should not every farmer raise enough of it to make all his fences, cribs, stables, barns and other necessary houses, and even build his dwelling houses out of it?

It makes finer char coal than any known timber. Blacksmiths have told me they would rather have it than stone coal. It grows easily and rapidly, and makes fine fire wood. Why not plant all the forests in the Southern states principally in Bodock, and when it grows up cut out all other timber and let the Bodock grow? If it makes fine fire wood, and grows easily and rapidly, then why not make the substitute? The only objection to it for fire wood is that it pops and sparkles badly, and is on this account unsuited to open fireplaces. I have seen women who would not tolerate it on an open fireplace, for fear of burning their children. After it burns into coal it will pop and friz fearfully, and throw out sparks in every direction. But for stove wood this would not be an objection, and the probabilities are that open fireplaces will soon be a thing of the past. It is also said to produce the most intense

heat of any timber in this country.

I have heard a few statements to the effect that it would not thrive on poor land. I do not believe a word of it. Nearly all kinds of timber, and, as far as I know, any timber will grow and flourish on poor land. It does not require rich land to grow fine timber, for I have seen it growing in large quantities almost to perfection on thousands of soils that were too poor for farming. This observation applies to any and all kinds of timber, and there is no reason why Bodock should be an exception. It is true that the soils where Bodock grows in this country are surpassingly rich, so in the section where I live there are no poor lands on which to test it. To say that there are no poor lands in a country is a high claim, but it applies, preeminently, to the section where I have lived for many years.

Another valuable way in which it could be used in building roads would be cause ways. Cause way a public road with it, and keep it covered a few inches in dirt, and it would never get seriously muddy. The only objection to using it in this way would be that as we now have it, it would be too crooked, but above, it will be seen, that this objection can be remedied.

For bridges on public roads it could not be surpassed. This is always a heavy source of expense, but a Bodock bridge once built would be there to stay, and save the heavy expenses of re-building every few years as it is now done.

In this country it is used extensively for piling. In our long summer droughts the land cracks open, and leaves places in which fence rails can be buried. This is not as often as it was before the country was settled, for we have more summer rains, but it frequently cracks enough to seriously injure brick and rock walls. To avoid this large quantities of piling are sometimes driven to make a foundation on which to build a fine house. I have heard it said that railroads use it also for piling in many places.

It is used for making wagon wheels, and its use for that purpose is continually increasing. With Bodock hubs,

spokes and felleos there is no man that could tell how long the wood work of the wheel would last. The wood is so heavy that it is generally used for nothing about a wagon but the wheels. It is said that Bodock wheels are so solid that they will not give, and on that account they will not stand in a rough, rocky country, but how true this is I do not know.

It is said to make fine dyes. Last Summer, 30 miles east of here I saw a lot of hands in Brookston trimming the sap wood from Bodock, and on inquiry I was told that it was for the purpose of making dyes for cloth factories, and it was shipped to England.

The Bodock grows a large, green apple in the shape of an orange, but much larger. I have never seen any kind of stock that would eat them except horses and mules. The apples are full of white milk, but while horses are very fond of them, yet they generally eat only a few at a time. I have thought that if they were ground, and mixed with other food that they might, in that way, constitute a large part of horse food, and even in their natural state they might be extensively used in the same way. Horses that are not raised to eat them will reject them, and would have to be learned to eat them. I have also thought that by grinding and cooking them it might be possible that other stock could be learned to eat them, especially if they were mixed with other food. They are permitted to rot where they fall all over this country, but by experimenting with them, I found that by keeping them dry and air tight they will keep a long time, and I think this could be done by putting them up in dry hills, or banks, like sweet potatoes, and covering them up air tight. I am fully convinced that farmers in this country annually lose large stores of horse food by failing to save their Bodock apples. Some people say that they injure horses, but fifteen years of observation satisfies me that this is a mistake. Here is another source of revenue, and another one to which all other forest trees are an entire stranger. Every farmer who would grow the Bodock might in this way raise a large part of his animal food with nothing to do, but gather apples as they fall. It might also be that cattle

refuse to eat apples for the want, of the front teeth that horses have, and even if this is not a fact, by feeding them to calves when they were young, and mixing the apples with other food they might be taught to eat and even relish them as much as horses.

The seed of the Bodock apple is so much like the seed of a cucumber that it might be difficult for an inexperienced person to tell them apart. It is said that one thousand apples will make a bushel of seed. While the large Bodock is being exhausted at a rapid rate, still where pasture lands are located near enough to receive the scattering of seed from growing trees the young Bodock seedling is rapidly on the increase, and when they attain a body only a few inches in diameter they begin to bear apples. By this means the stock of apples and seed are also rapidly on the increase. In traveling over the country every autumn hundreds and thousands of bushels can be seen on the ground rotting, and going to waste. North Texas, I am satisfied, grows enough Bodock seed every year to supply the demands of the world, even were it to appreciate the value of the timber, but only enough of the seed are saved to supply the demand, which is only a limited planting of Bodock hedges.

Nearly all the garden seedmen in the United States keep Bodock seed for sale, and any one who wants them can secure a supply from these sources. It is said that the seed will not germinate unless they are soaked in hot water. I have frequently seen this statement in print, but I never saw any instructions in regard to how hot the water should be, nor how long the seed should remain in soak. Without these instructions some men might cook their seed while others would not heat them enough to produce the necessary state for germination. Having never had any experience on the subject, I cannot give any definite instructions. I believe, however, that if the seed were planted in the fall or winter they would germinate in the spring, and I draw this conclusion from the large number of volunteer, seedling trees that I have seen. But experiments should be only on a small scale and this would be but an ex-

periment. "A burnt child dreads the fire," so let the reader take advice when it is from one who has been burnt, and who has seen many others burnt by trying new things on a large experimental scale.

So far as I have been able to judge Bodoock grows the first few years very slowly, but after it gets up to a good size it then grows very fast. In planting, or transplanting, the trees should be set four feet each way. Then when they get up large enough to be crowded, they can be thined, and the thinning can be repeated as the trees continue to grow. The thinnings can be used, and when the trees get very large they will answer for wagon timber, lumber, and other purposes. I do not know how close large trees should stand, but they should be left thick enough to produce tall, slender, straight bodies. If I was going to plant an orchard of Bodoock, if I was satisfied that the seed would germinate I would check the land off like corn land, and plant the seed in hills in the fall or winter, cultivate the plants until they had a good start and then let them go. All stock should be kept off of it until it gets out of their reach. Then sow it down in orchard grass. If it is timber land, cut out the small growth, and grub it every August until the stumps are dead. Then plant your Bodoock as above; or the grubbing can be done after the Bodoock is planted. When the standing trees are cut they will fall on the little Bodoocks and damage them, but if they are removed at once the damage will only be slight. In this way all timber land could be changed into Bodoock forests within a few years, and still retain a continual supply of timber, for all of the old timber would not be cut until the Bodoock was large enough to supply its place.

There is a forest society in the United States, and the government has had forest officials to encourage the cultivation of forests, but as far as I know, they have passed the Bodoock without any notice. If they only knew its value as people in North Texas know it, and then appreciated it, their reports and essays would be increased tenfold in value.

The subject of improving public roads has been discussed at great length for a number of years, and has called forth many

articles from the public printing press. A society offered a reward for the best essay on public roads which called forth many writers. I read the report of the winning prize, and it contained a large amount of valuable information. Had the writer been well acquainted with Bodoock, and its superior paving merits his essay would have been increased many fold in value. He could have pictured Bodoock growing by the side of the road, on every highway in the world, in sufficient quantities to make a road superior to any rock pavement. And that this fine timber could be produced at official expese, and at the lowest possible cost to the public, and without the expense of transportation. He could have went on with the picture of all the paving blocks being changed into stove wood as soon as it decayed, and then a new stock growing on the side of the road for a new pavement. Then he could have went on with the picture of millions of bushels of apples produced on the government trees, and being annually sold to the farmers for stock feed.

I have been calculating on the amount of timber it will take to pave a public road, and have arrived at the following calculation. A pole ten inches at the large end and two inches at the small end will make an average of six inches in diameter. A pole of this description twenty feet long, and sawed into six inch blocks would pave one square yard. If they could be grown in hills six feet each way, an acre would contain 1210 poles. Thirty-six feet, or twelve yards would probably be wide enough for a public road. Some might be wider and some narrower, but this would probably be fully an average. Twelve hundred poles then would pave one hundred yards of road, and these would easily grow on an acre, if they could stand six feet apart. Seventeen hundred and sixty yards make a mile, so 176-10 acres would then pave a mile of road, as often as the above poles could be grown. A section then, or a square mile of 640 acres would pave nearly 40 miles of road, as often as the timber could be grown. Then, as soon as the trees grew out of reach of stock, the land could be used for pasture, and the Bodoock apples for stock feed.

Every fruit nursery should have a forest nursery attached to it where Bodoock could be kept for sale, or there should be nurseries started exclusively for the purpose.

With so many important considerations before us why should not every farmer who owns a piece of land plant one or more acres in Bodoock? Then, as soon as its value is generally known, there will be an extensive demand for the timber, and if they could not get sale for it, they could use it in building all the out houses on the farm, and for all kinds of fencing. There is no danger of having a worthless product on hand, for if no other use could be found for it, then it could be burnt for fire wood, and it would be as valuable for that purpose as any timber on earth. It should be planted especially on public roads, for as soon as it would grow large enough for paving purposes, every highway could and probably would be paved with it.

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### RECAPITULATION.

In setting a forest of it prudence must be observed. Probably it would be best to sow the seed in nursery rows and then transplant the small trees, in land well broken, and in hills six feet each way. A hill of corn might be planted between the trees and the land be cultivated only one way. The trees must be well cultivated for one or two years, for unless it is done weeds will choke them before they take sufficient root. Large areas in the Northwest have been planted in forest trees, but they never do any good unless they are cultivated until they acquire a strong vigorous growth.

It would require a long time for the trees to grow large enough for service, but as soon as they were well set the value of any farm would be greatly enhanced. If a farmer has pasture land let him set his tillable land in Bodoock, and turn it into pasture, and then cultivate his pasture land. He could sow orchard grass among the trees as soon as they were well set, and use the land for pasture as soon as the trees were large enough to resist the ravages of stock.

If I wanted to make a safe investment, I would as leave risk it in a field set in Bodoock as in anything else, for it would soon increase the value of the land ten, or possibly, a hundred fold. If a man had one thousand acres well set in Bodoock, and near a large city, the timber would probably bring several hundred dollars per acre, and a new growth would soon succeed the cutting.

It is said that the seed must be soaked or scalded in hot water before they will germinate, so care is necessary on this point.

We repeat that Bodoock is, probably, the finest paving material in the world. Its superiority over rock lies in the fact that it will not crumble as rock does, so rock pavements will wear out much faster than Bodoock.

Who would not call Bodoock the finest timber in the world? And who would not spell its name every time with a capital initial letter?

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NOTE:—This note is to inform the reader that the foregoing pages were written within the iron walls of a prison cell. The writer was then suffering under the false charge of insanity. During the incarceration eight additional books and pamphlet manuscripts were also written, all of which will, probably, be published. These writings will speak in language that cannot be misunderstood, and they will tell the tale of a religious persecution only surpassed by the Romish Inquisition.

Each and all the charges of wrong under which the arrest was made were wholly untrue, and unfounded, and the writer would feel entirely free to pursue the same line of action if he was again placed under similar circumstances. About three hundred dollars' worth of means were lost, and an imprisonment endured which lasted twenty months. Eleven months, and twenty-three days, of this time, were spent in a criminal cell.

On the preliminary examination, and on the trial, in the presence of a large audience, and now again, the writer has declar-

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ed, and still declares, to the world, that the whole of the persecution originated in religious malice, and was therefore, an unprovoked religious persecution.

“The pen is mightier than the sword,” and through its office the matter will never be permitted to rest until every fraction of the insanity charge is removed from the character of a persecuted minister of Christ.

J. M. COCHRAN.





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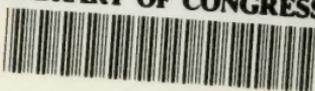


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